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ABSTRACT

Questionnaires were sent to 116 Coordinators of Special Needs Projects of Michigan to assess the effectiveness of mainstreaming handicapped children in vocational education programs throughout the state. The purposes of the survey were: 1) to obtain information about the institutions that were mainstreaming; 2) to ascertain which program areas were available and the numbers of handicapped students that were enrolled in these programs; 3) to ascertain the types of support systems that were being used for mainstreamed classes and the function of the special education personnel; 4) to determine the types and numbers of handicapped students that were being mainstreamed; 5) to investigate the types of teacher training programs that were being used and the experiences of the regular classroom teacher; and 6) to determine the problems encountered in mainstreaming. Findings included that the educable mentally impaired were mainstreamed at the most locations, while the emotionally impaired were mainstreamed least; that the majority of regular classroom teachers had received some training to aid them in working with handicapped students; and that parents of handicapped students and special education staff tend to be most supportive of mainstreaming, while regular teachers and parents of normal students tend to be least supportive. (Author/SBH)

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AN EVALUATION OF MAINSTREAMING IN VOCATIONAL EDUCATION PROGRAMS IN THE STATE OF MICHIGAN

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ABSTRACT

An assessment of Mainstreaming in Vocational Education programs throughout the State of Michigan was conducted during the first half of 1976. Mainstreaming is the integration of handicapped students into the regular class. The purposes of the survey were: 1) to obtain information about the institutions that were Mainstreaming, 2) to ascertain which program areas were available and the numbers of handicapped students that were enrolled in these programs, 3) to ascertain the types of support systems that were being used for the mainstreamed classes and the function of the special education personnel, 4) to determine the types and numbers of handicapped students that were being mainstreamed, 5) to ascertain the types of teachers training programs that were being used and to ascertain the experiences of the regular classroom teacher, and 6) to determine the problems encountered in Mainstreaming. The survey's sample was the 116 Coordinators of Special Needs Projects of Michigan who were being funded for Mainstreaming in Vocational Education. The survey instrument was a twenty-four item questionnaire. The responses were analyzed in terms of the six purposes of the survey.

AN EVALUATION OF MAINSTREAMING IN VOCATIONAL EDUCATION PROGRAMS IN THE STATE OF MICHIGAN

An assessment of Mainstreaming in Vocational Education programs throughout the State of Michigan was conducted during January, February, March, and April, 1976. There were several purposes for conducting this survey. The first was to obtain information about the institutions that were mainstreaming. This information included the level(s) of the institutions, the county of location, and the number of students that were enrolled. The second purpose was to ascertain which program areas were available and the numbers of handicapped students that were enrolled in these programs. The third purpose of the survey was to ascertain the types of support systems that were being used for the mainstreamed classes and the function of the special education personnel. The fourth purpose was to determine the types and numbers of handicapped students that were being mainstreamed. The fifth purpose was to ascertain the types of teacher training programs that were being used and to ascertain the experiences of the regular classroom teacher. The final purpose of the survey was to determine the problems that have been encountered in Mainstreaming.

Method

The survey's sample was the 116 Coordinators of Special Needs Projects of Michigan who were being funded for Mainstreaming. The names and addresses of the coordinators were obtained from a list which was provided by the Michigan Department of Education,

Disadvantaged and Handicapped Programs Unit. Each of the coordinators, or their qualified representative, was contacted by telephone. The purpose of this was to inform them of the nature of the survey and to ascertain their willingness to cooperate. Fully 100% of those who were contacted stated that they were willing to participate in the survey.

The survey instrument was a twenty-four item questionnaire. While most of the items were objective, the two final items were open-ended. The questionnaire was divided into six sections. These sections corresponded with the six purposes of the survey. While specific reliability and validity coefficients were not calculated, an attempt was made to construct a reliable and valid instrument. To insure reliability, the entire population of Coordinators of Special Needs Projects was surveyed. To insure item and content validity, the questionnaire was reviewed by qualified professionals in Measurement and Evaluation, Vocational Education, and Special Education.

The questionnaire was mailed during the later part of February, 1976. A letter of introduction, signed by the Coordinator of Vocational Education at Michigan State University, was enclosed with the questionnaire. In addition, a self-addressed, postage paid envelope was included.

Results

A total of 82 completed questionnaires were returned. This constituted 71.6% of the original sample. A manual tabulation of the responses was made for each item. A discussion of the findings follows.

Information About the School

Questions in this section concerned the levels of the institutions, the county of location, and the number of students that were enrolled. Analysis of the responses indicated that a majority (74.0%) of the respondents were reporting information about high schools (see table 1). In addition, fifty-two (52) counties out of eighty-three (83) counties in Michigan were represented in the sample (see table 2). Enrollment figures indicated that a majority of the respondents (50.6%) had over 1500 students within their jurisdictions (see table 3).

Program Areas

A number of questions referred to the three program areas, College Preparatory, General Education, and Vocational Education. The questions sought to find out the program areas that were available to regular students, the number of handicapped students that were enrolled in the program areas, the kinds of vocational programs that were offered, and the per-cent of handicapped students that were being mainstreamed into the different vocational programs.

Several findings were obtained. First, all of the three program areas were offered to regular students by a majority of the respondents (see table 4). Second, a majority of the handicapped students were enrolled in Vocational Education programs. Fewer handicapped students were enrolled in General Education and College Preparatory programs (see table 5). Third, Trade and Industrial programs were offered most frequently by the institutions. Other Vocational programs offered by more than one half

of the respondents included Distributive Education, Homemaking, Health Education, and Industrial Arts (see table 6). Finally, an analysis of the responses indicated that the greatest proportion of handicapped students were being mainstreamed into Trade and Industrial programs. This was followed by Homemaking, Health Education, Distributive Education, Industrial Arts, and Agricultural Education (see table 7).

Support Systems and the Function of the Special Education Personnel

Two questions determined the types of support systems that were being used for the mainstreamed classes and the function of the special education personnel. A tabulation of the responses indicated that the school counselor, the paraprofessional, the certified regular classroom teacher, and the consulting special education teacher were used by 75% or more of the respondents. On the other hand, the student teacher, the physical therapist, the occupational therapist, and the curriculum resource consultant were used by less than 25% of the respondents (see table 8). Additionally, a majority of the respondents indicated that the special education teacher did not enter the classroom, but was available for consultation (see table 9).

Types and Numbers of Handicapped Students

Several questions considered the types and numbers of handicapped students that were being mainstreamed. The findings indicated that the educable mentally impaired were being mainstreamed at the most locations. This was followed by the learning disabled, the physically or otherwise health impaired, the hard of hearing and

deaf, the speech and language imparied, the visually handicapped and the multiple handicapped. The emotionally impaired were reported in the "other" category. These were mainstreamed at the least number of locations (see table 10).

The greatest number of handicapped that were being mainstreamed were Speech and Language Impaired. This group was followed by the Educable Mentally Impaired, the Learning Disabled, the Physically or Otherwise Health Impaired, the Emotionally Impaired, the Hard of Hearing and Deaf, the Multiple Handicapped, and the Visually Impaired. Relatively few of the Physically Imparied, the Emotionally Impaired, the Hard of Hearing and Deaf, the Multiple Handicapped, and the Visually Impaired were being mainstreamed, compared to the higher numbers of the Educable Mentally Impaired, the Speech and Language Impaired, and the Learning Disabled that were being mainstreamed (see table 11).

A majority of the respondents indicated that less than 5% of the students in the regular classroom were handicapped (see table 12).

Apparently, the Speech and Language Impaired, the Visually Handicapped, the Emotionally Impaired and the Physically Impaired are being mainstreamed for a greater part of the school day than are the other goups. In most cases, the Educable Mentally Impaired, the Learning Disabled, and the Multiple Handicapped are being mainstreaded for less than one-half of the school day (see table 14).

One question attempted to assess who made the most student referrals for placement of a handicapped student into a regular call. The greatest number of respondents (44.2%) indicated that

the certified special education teacher (in class) made the most initial student referrals (see table 13).

Types of Regular Teacher Training and the Experiences of the Regular Classroom Teacher

Questions in this section assessed the availability of in-service teacher training, the types of training that were offered, the percentages of teachers receiving specific types of training, and the respondents overall satisfaction with the training.

Seventy three point three percent of the respondents indicated that their regular classroom teachers had received some training to aid them in working with handicapped students. The remainder, 26.7%, indicated that their regular teachers had received no training to aid them in working with handicapped students (see table 15).

A majority of the respondents indicated that their teachers had received some in-service training. This was followed by workshops, conferences, and university courses (see table 16).

In addition, the data indicated that a majority of the trained teachers (50.1%) received in-service training (in school). Substantially fewer received the other types of training (see table 17).

In order to assess the respondents satisfaction with the training, we combined the responses for the two negative choices ("very dissatisfied" and "dissatisfied") and the responses for the two positive choices ("satisfied" and "very satisfied"), gives an indication of the overall sentiments of the respondents. This indicated that more of the respondents were displeased

than pleased with the training that their regular teachers had received (see table 18).

The questionnaire also assessed the amount of experience that the regular teachers involved in mainstreaming had. The greatest number of respondents indicated that their teachers had either 2-4 years of experience or 1-2 years of experience. Combining these categories indicated that 53.1% of the respondents' teachers had from 1 to 4 years of experience (see table 19).

Question 20 assessed the types of experiences that the respondents thought were most helpful. Combining ratings 1 and 2 for each type of experience gave an indication of what types of experiences were most helpful in the training of mainstreaming teachers. This indicated that a majority (56.9%) of the respondents felt that student teaching experience in the mainstreamed classroom was the most helpful type of practical experience. In addition, 50% of the respondents indicated that field visits to mainstreamed classrooms were also helpful. Forty-one point four percent of the respondents felt that field placement in nearby handicapped centers was helpful.

Combining ratings 4 and 5 for each type of experience gave an indication of what types of experience were least helpful in the training of mainstreaming teachers. The results indicated that 46.6% of the respondents felt that field visits to handicapped centers were the least helpful type of practical experience. Thirty-seven point nine percent of the respondents felt that simulation activities were less helpful than most of the other types of experiences.

In summation, student teaching experience in the mainstreamed classroom, field visits to mainstreamed classrooms, and field placements in nearby handicapped centers were usually more helpful than field visits to handicapped centers and simulation activities (see table 20).

Problems Encountered In Mainstreaming

The questions in this section assessed which groups were the most and the least supportive of the Mainstreaming concept and the problems encountered in modifying the curricula for the handicapped students. In addition, the respondents were asked to make recommendations for improving Mainstreaming.

Taken together, the results of questions 21 and 22 are consistent. The joint findings indicate that the parents of handicapped students and the Special Education staff tend to be most supportive of mainstreaming, while the regular teachers and the parents of normal students are the least supportive of mainstreaming (see table 21 and 22).

The most frequent problem encountered seemed to be the cooperation of the regular teachers in modifying the curricula. Other problems included modifying the curriculum itself, insufficient methods and materials, the inabilities of the handicapped students, and poor teacher preparation. Only four respondents (6.6%) stated that they had encountered no problems (see table 23).

The respondents made a variety of recommendations for improving Mainstreaming. The most frequently occurring recommendations included developing in-service teacher training programs (32.7%),

more funds (23.6%), requiring all pre-service teachers to take special education and Mainstreaming methods courses (26.3%), and hiring more paraprofessionals (12.&%).

TABLE 1

SCHOOL LEVELS

Level	Number	Percent
K-5	22	28.6
6-8	23	29.9
9-12	57	74.0
Secondary Vocational Center	27	35.1
Post Secondary Vocational Center	2	2.6
Community College	8	10.4

TABLE 2

COUNTIES OF THE RESPONDENTS

County	Number	County	Number	County	Number
Alcona	0	Grand Traverse	1	Midland	0
Alger	0	Gratiot	1	Misaukee	1
Allegan	1	Hillsdale	0	Monroe	0
Alpena	1	Houghton	1	Montcalm	2
Antrim	0	Huron	1	Montmorency	0
Arenac	2	Ingham	5	Muskegon	2
Baraga	0	Ionia	0	Newago	2
Barry	0	Iosco	0	Oakland	4
Bay	1	Iron	0	Oceana	1
Benzie	0	Isabella	0	Obeman	1
Berrien	2	Jackson	2	Ontonagon	1
Branch	0	Kalamazoo	3	Oseceola	1
Calhoun	2	Kalkaska	0	Oscoda	1
Cass	2	Kent	0	Otsego	1
Charlevoix	0	Keweenaw	0	Ottawa	3
Cheboygan	0	Lake	0	Presque Isle	1
Chippewa	1	Lapeer	1	Roscommon	1
Clare	1	Lenawee	1	Saginaw	3
Clinton	0	Livingston	1	St. Clair	1
Crawford	1	Luce	1	St. Joseph	1
Delta	0	Mackinac	0	Sanilac	0
Dickinson	1	Macomb	7	Schoolcraft	0
Eaton	2	Manistee	0	Shiawassee	0
Emmet	1	Marquette	2	Tuscola	0
Genesee	6	Mason	1	Van Buren	0
Gladwin	1	Mecosta	0	Washtenaw	1
Gogebic	1	Menominee	1	Wayne	3
				Wexford	1

TABLE 3

NUMBER OF STUDENTS WITHIN THE RESPONDENTS' JURISDICTION

Category	Number of respondents	Percent
less than 200	4	5.2
201 - 500	4	5.2
501 - 700	12	15.6
701 - 1000	7	9.1
1001 - 1500	11	14.3
over 1500	39	50.6

TABLE 4

PROGRAM AREAS AVAILABLE TO REGULAR STUDENTS

Program	Number	Percent
College Preparatory	60	82
General Education	62	82.7
Vocational Education	75	100.0

TABLE 5

NUMBER OF HANDICAPPED STUDENTS ENROLLED IN EACH PROGRAM AREA

Program Area	Number of handicapped students	Average number of handicapped students per respondent	Percent of total number of handicapped
College Preparatory	626	9.8	13.6
General Education	1394	21.8	30.3
Vocational Education	2581	40.3	56.1
TOTALS	4601	71.9	100.0

TABLE 6

VOCATIONAL PROGRAMS OFFERED

Vocational Program	Number	Percent
Agricultural Education	33	42.9
Trade and Industrial	74	96.1
Industrial Arts	50	64.9
Distributive Education	66	85.7
Homemaking	60	77.9
Health Education	63	81.8

TABLE 7

PERCENT OF HANDICAPPED BEGIN MAINSTREAMED

Program	Percent of Handicapped Being Mainstreamed
Agricultural Education	8.5
Trade and Industrial	29.4
Industrial Arts	10.4
Distributive Education	11.2
Homemaking	27.4
Health Education	11.9

TABLE 8

TYPES OF SUPPORT SYSTEMS

Support System	Number using the system	Percent of total respondents
Certified reg. class. teacher	75	79.2
Cert. spec. ed. teacher (consulting)	58	75.3
Cert. spec. ed. teacher (in class)	45	58.4
Curriculum resource center	25	32.5
Curriculum resource consultant	18	23.4
Occupational therapist	17	22.1
Paraprofessional	66	85.7
Physical therapist	14	18.2
Resource room	40	51.9
School counselor	69	89.6
School nurse	30	39.0
School psychologist	52	67.5
Social worker	46	59.7
Special education supervisor	46	59.7
Speech therapist	38	49.4
Student teacher	13	16.9
Voc. rehab. counselor	41	53.2
Other	16	20.1

TABLE 9

FUNCTION OF THE SPECIAL EDUCATION TEACHER

Choice	Number	Percent
He/she assists the regular classroom teacher throughout the entire day in the mainstreamed classroom.	5	6.8
He/she assists the regular classroom teacher for part of the day in the mainstreamed classroom.	13	17.8
He/she does not enter the mainstreamed classroom, but is available for consultation.	52	71.2
There is no special education teacher involved.	3	4.1

TABLE 10

TYPES OF HANDICAPPED BEING MAINSTREAMED

Type of Handicapped	Number of respondents	Percent of sample
Educable Mentally Impaired	70	90.1
Hard of Hearing and Deaf	47	61.0
Learning Disabled	67	87.0
Multiple Handicapped	27	35.0
Physically or Otherwise Health Impaired	54	70.1
Speech and Language Impaired	44	57.2
Visually Handicapped	32	41.6
Other (Emotionally Impaired)	17	22.1

TABLE 11

NUMBERS OF HANDICAPPED BEING MAINSTREAMED

Type of handicap	Number being Mainstreamed	Percent of total handicapped being mainstreamed
Educable Mentally Impaired	1862	31.5
Hard of Hearing and Deaf	209	3.5
Learning Disabled	1054	17.8
Multiple Handicapped	107	1.8
Physically or Otherwise Health Imp.	380	4.7
Speech and Language Impaired	2093	35.4
Visually Handicapped	63	1.1
Other (Emotionally Impaired)	241	4.1
Total	5909	

TABLE 12

PERCENT OF STUDENTS IN REGULAR CLASSROOM THAT ARE HANDICAPPED

Percent range	Number	Percent of respondents
less than 5%	49	70.0
5%-10%	13	18.6
10%-15%	3	4.3
15%-20%	1	1.4
20%-25%	3	4.3
25%-30%	1	1.4
over 30%	0	0

TABLE 13

PERSON MAKING THE MOST INITIAL STUDENT REFERRALS

Person	Number of responses	Percent of sample
Cert. regular classroom teacher	9	11.7
Cert. special ed. teacher (consulting)	19	24.7
Cert. special ed. teacher (in class)	34	44.2
Curriculum resource center	0	0
Curriculum resource consultant	0	0
Occupational therapist	0	0

TABLE 13 (cont.)

PERSON MAKING THE MOST INITIAL STUDENT REFERRALS

Person	Number of responses	Percent of sample
Paraprofessional	0	0
Physical therapist	0	0
Resource room	3	3.9
School counselor	22	28.6
School nurse	0	0
School psychologist	12	15.6
Social worker	4	5.2
Special ed. supervisor	5	6.5
Speech therapist	1	1.3
Student teacher	0	0
Vocational rehab. counselor	5	6.5
Other	11	14.3

TABLE 14

AVERAGE TIME SPENT IN REGULAR CLASSROOM

Type of Handicap	Less than 1/2 of school day (Code 1 & 2) Number	Percent
Educable Mentally Impaired	47	71.2
Hard of Hearing and Deaf	22	50.0
Learning Disabled	32	51.6
Multiple Handicapped	15	55.5
Physically or Otherwise Health Impaired	18	45.0
Speech and Language Impaired	10	25.7
Visually Handicapped	16	44.4
Other	4	25.0

Type of Handicap	More than 1/2 of school day (Code 3 & 4) Number	Percent
Educable Mentally Impaired	19	28.8
Hard of Hearing and Deaf	22	50.0
Learning Disabled	30	48.3
Multiple Handicapped	12	44.4
Physically or Otherwise Health Impaired	22	55.0
Speech and Language Impaired	29	74.4
Visually Handicapped	20	55.6
Other	12	75.0

TABLE 15

TRAINING FOR REGULAR CLASSROOM TEACHERS

YES	NO
73.3%	26.7%

TABLE 16

REGULAR TEACHER TRAINING

Type of Training	Number of responses	Percent of sample
In-service training (in school)	40	51.9
Workshops	27	35.1
University courses	13	16.9
Conferences of conventions	23	29.9
Other	1	1.3

TABLE 17

PERCENT OF TEACHERS RECEIVING TYPES OF TRAINING

Type of Training	Percent
In-service training (in school)	50.1
Workshops	15.7
University courses	5.3
Conferences or conventions	11.8
Other	0.7

TABLE 18

RESPONDENTS' SATISFACTION WITH TEACHER TRAINING

Choice	Number	Percent	Choice	Number	Percent
Very dissatisfied	7	10.2	Very satisfied	4	5.8
Dissatisfied	26	37.7	Satisfied	20	29.0
TOTAL	33	47.8	TOTAL	24	34.8
No opinion	12	17.4			

TABLE 19

TEACHERS' EXPERIENCE IN MAINSTREAMED CLASSROOMS

Amount of time	Number	Percent	Number	Percent
6 months or less	13	20.3		
6 months to 1 year	8	12.5		
1-2 years	15	23.4	34	53.1
2-4 years	19	29.7		
4-6 years	1	1.6		
6 or more years	8	12.5		

TABLE 20

RESPONDENTS' RATING OF PRACTICAL TRAINING

	Most helpful 1 & 2	Percent of 58	Least helpful 4 & 5	Percent of 58
Field placement in nearby handicapped centers	24	41.4	16	27.6
Field visits to handicapped centers	11	19.0	27	46.6
Field visits to mainstreamed classrooms	29	50.0	14	24.1
Simulation activities	15	25.9	22	37.9
Student teaching experience in mainstreamed classroom	33	56.9	9	15.5
Other (specify)				

TABLE 21

MOST SUPPORTIVE OF MAINSTREAMING

Group	Number	Percent
Administrative staff	49	64.5
Guidance & counseling personnel	55	72.4
Handicapped students	39	51.3
Normal students	15	19.7
Parents of handicapped students	62	80.5
Parents of normal students	5	6.6
Regular teachers	16	21.1
Special education personnel	61	80.3
Other (specify)	3	0.5

TABLE 22

LEAST SUPPORTIVE OF MAINSTREAMING

Group	Number	Percent
Administrative staff	15	24.2
Guidance & counseling personnel	12	19.4
Handicapped students	4	6.5
Normal students	18	29.0
Parents of handicapped students	5	8.1
Parents of normal students	18	29.0
Regular teachers	43	69.4
Special education personnel	4	6.5
Other (specify)	0	0

TABLE 23

PROBLEMS ENCOUNTERED IN MAINSTREAMING

Problem	Number	Percent
Cooperation of regular teachers	13	21.3
Curriculum has not been modified	9	14.8
Insufficient methods and materials	9	14.8
Poor teacher preparation	5	8.2
Insufficient time to organize the curriculum	4	6.6
Inability of handicapped students	7	11.5
Class size	2	3.3
Evaluation of handicapped students performance	2	3.3
Administrators attitudes	2	3.3
Too many to discuss	2	3.3
Student selection	1	1.6
Dealing with an out of state vocational center	1	1.6
No problems	4	6.6

TABLE 24

Recommendations	Number	Percent
Develop in-service teachers training programs	18	32.7
More funds	13	23.6
Require all pre-service teachers to take special education and mainstreaming methods courses	13	26.3
More paraprofessionals	7	12.7
Set realistic goals for the training of handicapped students	2	3.6
Develop different techniques and procedures to suit the different kinds of institutions (e.g., voc. centers, special schools, community colleges)	2	3.6
Evaluate the concept of mainstreaming. Make sure that it is the right direction to go	1	1.8
Pay attention to the recommendations of the EPPC	1	1.8
Resource room should be available to mainstreamed vocational education students	1	1.8
Special education staff should support and provide consultation for teachers	1	1.8
Better materials	1	1.8
Change the master contract so that handicapped students can be included in calculating class size	1	1.8
Alter the curriculum to suit the student	1	1.8
Begin pre-vocational training before middle school	1	1.8
Change the grading system	1	1.8